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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,490	10/23/2001	Raman Chandrasekar	MSFT-0739/158459.1	9421

41505 7590 08/24/2005

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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/004,490	CHANDRASEKAR ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,7-21,23-41 and 44-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,7-21,23-41 and 44-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendments

1. The Action is responsive to the Applicant's Amendments, filed on May 24, 2005.

2. The Applicant's Amendments made to claims are noted and considered.

3. As for the Applicant's Remarks on claim rejections, filed on May 24, 2005, has been fully considered by the Examiner, please see discussion in the section ***Response to Arguments***, following the Office Action for Final Rejection (hereafter "the Action").

4. Regarding the Applicant's amendments filed on filed on May 24, 2005, the following new issues were raised which would require further consideration and/or new search. Please see MPEP 706.07(b).

The element ""analyzing the spelling of the at least one word and determining whether at least one word has a mistake" in the independent claims 1, 19 and 40, was amended to "analyzing the spelling of the at least one word and determining, for each word, whether at least one word has a mistake".

In order to address the new issues, the Examiner has conducted update searches and incorporated a new reference for claims rejection in the Action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for

patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 35-39 are rejected under 35 U.S.C. 102(e) as anticipated by Ortega et al. (U.S. Patent 6,401,084, hereafter "Ortega").

As per Claim 35, Ortega teaches the following:

"first displaying the auto-corrected query data set in the query input mechanism" at Fig. 4, element 94 and Col. 10, lines 33-51 by preferably displaying the search result performed by the modified search to the user;

"second displaying the search results based upon the auto-corrected query data set" at Fig. 4, element 94 and Col. 10, lines 42-51 by performing the search with modified term and returning the search result for displaying at user's computer; and

"near the query input mechanism, third displaying a link which enables the re-performance of the service with the entered query data set" at Fig. 2 and Col. 10, lines 33-41 by using the internet page as link for transmitting between user computer and server, and preferably displaying the search result page with option allowing user to revise the query and re-attempt to query.

As per Claim 36, Ortega teaches "in response to an inputting of the link, fourth displaying the entered query data set in the query input mechanism" at Fig. 2 by using

an internet page as a link to input a query and at Fig. 4, element 94 and Col. 10, lines 33-41 by preferably displaying the query results page and the modified query; and "fifth displaying the search results based upon the entered query data set" at Fig. 4, element 94 and Col. 10, lines 33-41 by preferably displaying the query results page.

As per Claim 37, Ortega teaches "in response to re-entering of the entered query data set to the query input mechanism, fourth displaying the entered query data set in the query input mechanism" at Fig. 2 by using an internet page as a link to input a query and at Fig. 4, element 94 and Col. 10, lines 33-41 by preferably displaying the query results page and the modified query; and
"fifth displaying the search results based upon the entered query data set" at Fig. 4, element 94 and Col. 10, lines 33-41 by preferably displaying the query results page.

As per Claim 38, Ortega teaches "computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 1" at Fig. 1, element 34, the user's computer and Fig. 2, the computer-executable instructions in the form of web page.

As per Claim 39, Ortega teaches "data signal carrying computer executable instructions for performing the method of claim 1" at Fig. 1, element 34, the user's computer and Fig. 2, the computer-executable instructions in the form of web page.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-2, 4, 7-10, 13, 15-21, 23-26, 29, 31-34, 40-41, 44-47, 50 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega et al. (U.S. Patent 6,401,084, hereafter "Ortega") in view of Bowman et. al (U.S. Patent 6,006,225, hereafter "Bowman").

As per Claim 1, Ortega teaches the following:

"receiving from a client computing device original query entry data comprising at least one word" at Fig. 2 and Col. 4, lines 28-46 by user submitting a search query from the site by entering the fields on the search page; and

"analyzing the spelling of the at least one word and determining" "whether at least one word has a mistake" at Fig. 4, elements 72 and 76 and Col. 8, lines 41-56 by query server to determine whether the query includes both the matching and non-matching terms.

Note Ortega does not specifically teach the above analyzing and determining for each word.

However, Bowman teaches the analysis and determination of occurrence frequency rate for each term appears in the related terms list.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Bowman reference into Ortega's by analyzing and determining spelling of text terms to each word level because both references are devoted to queries where Ortega mainly teaches spelling correction while Bowman focuses on suggesting alternative query terms, the combined teaching would have enabled a query and search system to consider all potentially important information entered by the users and further provide users with high value of alternative terms, made possible by analyzing and determining query terms to each word level, for allowing user to quickly and efficiently locating the most relevant information.

Ortega further teaches "forming auto-corrected query entry data wherein said forming includes, for each word having a mistake, replacing the word having the mistake with an alternative word, if the alternative word satisfies at least one threshold confidence calculation" at Fig. 4, elements 72-88 and Col. 9, line 48 - col. 10, line 5 by executing a spelling comparison function to replace the non-matching term and evaluate its similarity score to determine for replacing the term for forming a modified query.

As per Claim 19, Ortega teaches the following:
"inputting to the query input mechanism of the client computing device original query entry data comprising at least one word" at Fig. 2 and Col. 4, lines 28-46 by user submitting a search query from the site by entering the fields on the search page;

"transmitting said original query entry data to a server computing device" at Fig. 1, elements 34, 32 and 38, and Col. 4, lines 4-27by user to transmit query string through the web page with fields filled by the user at the user's computer; and

"receiving results from the performance of said service based on auto-corrected query entry data, wherein the forming of the auto-corrected query entry data in connection with said performance includes" at Fig. 4, element 94 and Col. 10, lines 25-41 by server performing auto-corrected query which is formed by executing a program to modify the query; and

"analyzing the spelling of the at least one word of the original query entry data and determining whether at least one word has a mistake" at Fig. 4, elements 72 and 76 and Col. 8, lines 41-56 by query server to determine whether the query includes both the matching and non-matching terms.

Note Ortega does not specifically teach the above analyzing and determining for each word.

However, Bowman teaches the analysis and determination of occurrence frequency rate for each term appears in the related terms list.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Bowman reference into Ortega's by analyzing and determining spelling of text terms to each word level because both references are devoted to queries where Ortega mainly teaches spelling correction while Bowman focuses on suggesting alternative query terms, the combined teaching would have enabled a query and search system to consider all potentially important

information entered by the users and further provide users with high value of alternative terms, made possible by analyzing and determining query terms to each word level, for allowing user to quickly and efficiently locating the most relevant information.

Ortega further teaches "for each word having a mistake, replacing the word having the mistake with an alternative word, if the alternative word satisfies at least one threshold confidence calculation" at Fig. 4, elements 58-88 and Col. 9, line 48 - col. 10, line 5 by executing a spelling comparison function to replace the non-matching term and evaluate its similarity score to determine replacing the term for forming a modified query.

As per Claim 40, Ortega teaches the following:
"means for receiving from a client computing device original query entry data comprising at least one word" at Fig. 2 and Col. 4, lines 28-46 by user submitting a search query from the site by entering the fields on the search page; and
"means for analyzing the spelling of the at least one word and means for determining" "whether at least one word has a mistake" at Fig. 4, elements 72 and 76 and Col. 8, lines 41-56 by query server to determine whether the query includes both the matching and non-matching terms.

Note Ortega does not specifically teach the above analyzing and determining for each word.

However, Bowman teaches the analysis and determination of occurrence frequency rate for each term appears in the related terms list.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Bowman reference into Ortega's by analyzing and determining spelling of text terms to each word level because both references are devoted to queries where Ortega mainly teaches spelling correction while Bowman focuses on suggesting alternative query terms, the combined teaching would have enabled a query and search system to consider all potentially important information entered by the users and further provide users with high value of alternative terms, made possible by analyzing and determining query terms to each word level, for allowing user to quickly and efficiently locating the most relevant information.

Ortega further teaches the following:

"means for generating auto-corrected query entry data if according to at least one threshold confidence calculation, the auto-corrected query entry data corrects at least one mistake in the original query entry data" at Fig. 4, elements 58-88 and Col. 9, line 48 - col. 10, line 5 by executing a spelling comparison function to replace the non-matching term and evaluate its similarity score to determine replacing the term for forming a modified query; and

"means for performing said network service automatically replacing said original query entry data with said auto-corrected query entry data" at Fig. 1, elements 34, 32 and 38 by showing the network architecture of the service, and at Fig. 4, elements 86, 88 and 94, and Col. 9, line 64 - col. 10, line 5 by executing a program for automatically modifying the query by replacing the non-matching term based on similarity scoring mechanism.

As per Claim 2, Ortega teaches before receiving, "query entry data is input to the client computing device in the query input mechanism of the service" at Fig. 1, element 34 and Col. 4, lines 4-12by user to submit query for search from the user computer and the query is received by web server from the internet.

As per claims 53 and 55, Ortega teaches the following:

"performing the service utilizing the auto-corrected query entry data instead of the original query entry data" at col. 4, lines 37-46 and col. 5, lines 36-43 where user is presented with modified items to select, including the hyper textual links, to select the result pages;

"sending the results of performing the service with the auto-corrected query entry data to the client computing device for display" at Fig. 4, elements 72-74 where list of result items are returned to user when items found; and

"transmitting link data to the client computing device for displaying a link on the client computing device, which link, if input by the user, re-performs the service with the original query entry data instead of the auto-corrected query entry data" at col. 4, lines 37-46 and col. 5, lines 36-43 where user is presented with modified items to select or enters a new search, including the original term, to perform the search.

As per claim 54, Ortega teaches "displaying on the client computing device a link, which link, if input by the user, re-performs the service with the original query entry data

instead of the auto-corrected query entry data" at col. 4, lines 37-46 and col. 5, lines 36-43 where user is presented with modified items to select, including the hyper textual links, or enters a new search, including the original term, to perform the search.

As per Claims 4, 20 and 41, Ortega teaches "the service is a search engine, and said performing includes returning search results based upon said auto-corrected query entry data" at Fig. 4, element 94 and Col. 10, lines 42-51 by performing the search with modified term and returning the search result.

As per Claims 7, 23 and 44, Ortega teaches "updating at least one confidence score associated with at least one replaced word of the auto-corrected query entry data to reflect that the user is dissatisfied with the auto-corrected query entry data" at Col. 9, lines 33-47 and Col. 10, lines 6-11 by halting step 3 for adjusting the result and updating similarity score of the replacing term in the auto modified query.

As per Claims 8, 24 and 45, Ortega teaches "including receiving again from the client computing device the original query entry data; and performing the service utilizing the original query entry data instead of the auto-corrected query entry data" at Fig. 2, Col. 4, lines 28-46and Col. 10, lines 33-36 by user rejecting the search term replacement and revising the query, and submitting a search query from the site.

As per Claims 9, 25 and 46, Ortega teaches "updating at least one confidence score associated with at least one replaced word of the auto-corrected query entry data to reflect that the user is dissatisfied with the auto-corrected query entry data" at Col. 9, lines 33-47 and Col. 10, lines 6-11 by halting step 3 for adjusting the result and updating similarity score of the replacing term in the auto modified query.

As per Claims 10, 26 and 47, Ortega teaches "determining whether at least one word has a mistake includes determining whether the at least one word is in a unified dictionary" at Col. 7, lines 25-41 by correcting misspellings of terms that do not appear in the dictionary and identifying the non-dictionary terms.

As per Claims 13, 29 and 50, Ortega teaches the following:
"for each word having a mistake, discovering at least one alternative word that is a nearest neighbor to the word having the mistake" at Col. 2, lines 21-34 by finding a related term with a sufficiently similar spelling to a non-matching term, the non-matching term is preferably replaced with the related term;
"calculating a confidence score for each of said at least one alternative word, wherein the confidence score is a relative measure of a likelihood that the alternative word is the word without the mistake" at Col. 8, line 66 - col. 9, line 10 and col. 9, lines 48-52 by scoring the similarity scores of non-matching term against each of the related terms; and

"determining whether any of the at least one alternative words has a confidence score that exceeds a first threshold" at Col. 9, line 64 - col. 10, line 5 by evaluating the similarity score to determine if the related terms passes the similar test to the non-matching term by measuring if its score is within the similarity threshold.

As per Claims 15, 31 and 52, Ortega teaches "if there is only one alternative word that is a nearest neighbor to the word having the mistake, and if the confidence score for the one alternative word exceeds the first threshold, replacing the word having the mistake with the alternative word" at Fig. 4, elements 86 and 88 and Col. 9, line 64 - col. 10, line 5 by selecting the replacing term from the related terms with the most similarity score to the non-matching term.

As per Claims 16 and 32, Ortega teaches "computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 1" at Fig. 1, element 34, the user's computer and Fig. 2, the computer-executable instructions in the form of web page.

As per Claims 17 and 33, Ortega teaches "data signal carrying computer executable instructions for performing the method of claim 1" at Fig. 1, element 34, the user's computer and Fig. 2, the computer-executable instructions in the form of web page.

As per Claims 18 and 34, Ortega teaches "device comprising means for performing the method of claim 1" at Fig. 1, element 34, the user's computer and Fig. 2, the computer-executable instructions in the form of web page.

As per Claim 21, Ortega teaches "sending the results of performing the service with the auto-corrected query entry data to the client computing device for display" at Fig. 4, element 94 and Col. 10, lines 33-51 by preferably displaying the search result performed by the modified search to the user.

8. Claims 11, 27 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega et al. (U.S. Patent 6,401,084, hereafter "Ortega") in view of Bowman et. al (U.S. Patent 6,006,225, hereafter "Bowman"), as applied to Claims 1, 10, 19, 26, 40 and 47 above, and further in view of Brill et al. (U.S. Publication 2003/0037077, hereafter "Brill").

As per Claims 11, 27 and 48, the combined teaching of Ortega and Bowman references teaches determining if at least one word has a mistake and where the at least one word in a dictionary as previously described in Claims 1, 10, 19, 26, 40 and 47 rejection.

The combined teaching of Ortega and Bowman references does not specifically teach "dynamically updating said unified dictionary, wherein said updating includes

aggregating a plurality of data stores, with said plurality of data stores including at least one dynamically updated data store".

However, Brill teaches updating dictionary, including single and strings of words by dynamically and frequently adding them to the dictionary at Col. 2, lines 21-34.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Brill's reference into Bowman and Ortega references by implementing a compact, dynamic dictionary such that missing or corrected words could be frequently added because by doing so the spelling correction would have been more effective due to the compact size and the dictionary would be more flexible to use because its content is dynamic and update-able.

9. Claims 12, 28 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega et al. (U.S. Patent 6,401,084, hereafter "Ortega") in view of Bowman et. al (U.S. Patent 6,006,225, hereafter "Bowman"), as applied to Claims 1, 10, 19, 26, 40 and 47 above, and further in view of Harris (U.S. Publication 2002/0059204).

As per Claims 12, 28 and 49, wherein the combined teaching of Bowman and Ortega references teaches determining if at least one word has a mistake and where the at least one word in a dictionary as previously described in claims 10, 26 and 47 rejections.

The combined teaching of Bowman and Ortega references does not specifically teach "unified dictionary is formed from a plurality data sources including a Web-specific lexicon".

However, Harris teaches searching of a plurality of data sources which includes text documents such as web pages that can include program instructions, and other types of text documents, text files, and database, although other data sources can be included at Col. 1, line 66 - col. 2, line 11.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Harris' teaching into Bowman and Ortega references by Implementing a distributed search engine having dictionary consisting of a plurality of data sources, including web-specific data because by doing so the customized dictionaries could customize the query to produce a customized query result.

10. Claims 14, 30 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega et al. (U.S. Patent 6,401,084, hereafter "Ortega") in view of Bowman et. al (U.S. Patent 6,006,225, hereafter "Bowman"), as applied to Claims 1, 13, 19, 29, 40 and 50 above, and further in view of Hoashi et al. (U.S. Publication 2001/0032204).

As per Claims 14, 30 and 51, wherein the combined teaching of Bowman and Ortega references teaches "if any of the at least one alternative words has a confidence score that exceeds the first threshold, determining for the two alternative words of the at least

one alternative words having the highest confidence scores" and "...replacing the word having the mistake with the alternative word having the highest confidence score" by using similarity threshold to determine if related terms are similar enough to a non-matching term at Col. 9, lines 48-52 where five related terms score differently on the similarity test against the non-matching term and selecting the term with the lowest score as the most similar term for the replacement.

The combined teaching of Bowman and Ortega references does not specifically teach "whether the difference between the two confidence scores is greater than a second threshold; and if the difference is greater than the second threshold, replacing the word having the mistake with the alternative word having the highest confidence score".

However, Hoashi teaches defining the first threshold value as the similarities of a set of documents matching the user's relevant profile and the second threshold value as the similarities of a set of documents matching the user's non-relevant profile.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Hoashi's reference into Bowman and Ortega references by implementing the second threshold test using the difference of the two most similar terms' similarity scores against a preset value because by doing so the selection of replacing terms from the most similar ones could be further scrutinized.

11. The prior art made of record

A. U.S. Patent 6,401,084

B. U.S. Publication 2003/0037077

C. U.S. Publication 2002/0059204

D. U.S. Publication 2001/0032204

I. U.S. Patent 6,006,225

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

E. U.S. Publication 2003/0069877

F. U.S. Publication 2002/0152204

G. U.S. Publication 2002/0194229

H. U.S. Publication 2003/0084041

Response to Arguments

12. The Applicants' Remarks, filed on May 24, 2005, have been fully considered, for the Examiner's response, please see discussion below.

a). At Pages 10-12, concerning claims 1, 19 and 40, the Applicant argued that the Ortega reference (U.S. Patent 6,401,084) does not teach for each word for the element of "analyzing the spelling of the at least one word and determining, for each word, whether at least one word has a mistake".

As to the above argument a), the Examiner respectfully submits that the newly amended claims and corresponding issue raised has been addressed by Examiner's introduction of Bowman reference.

b). At Page 12, concerning claim 35, the Applicant argued that the Ortega does not teach the element "near the query input mechanism, third displaying a link which enables the re-performance of the service with **the entered query data set**"", specifically with respect to **the entered query data set.**

As to the above argument b), the Examiner respectfully submits that the cited section of Ortega reasonably interprets the element. Furthermore, as evidenced by Fig. 2, where search entries including author, title and subject are the entered query data set and back/forward arrows allow re-performance of the service with the entered data set.

Conclusions

13. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1 .136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1 .136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S. Lu whose telephone number is 571-272-4114. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kuen S. Lu
Patent Examiner
August 17, 2005

Mohammad Ali
Primary Examiner
August 17, 2005